



United States
Department of
Agriculture

Forest
Service

Lochsa-Powell Ranger District
Kooskia, ID

File Code:

Date: June 16, 2020

Route To: Green Horse Project

Subject: Biological Evaluation for Aquatic Species

To: District Ranger

I. INTRODUCTION

This report focuses on the existing condition of aquatic species and habitats and the effects on them from the Green Horse Project proposed actions. Concerns were brought up during the scoping process regarding the potential delivery of sediment to streams from project activities. Timber harvest and temporary road construction are briefly assessed as they have little potential to effect streams due to the retention of PACFISH RHCAs and Best Management Practice (BMP) implementation. The effectiveness of the RHCAs will be discussed.

II. PROPOSED ACTION

Refer to the decision document for a detailed description of the proposed action. Timber harvest activities may begin during the summer of 2022 and occur over approximately the next 12 years; landscape burning would follow and would occur over approximately the next 20 years; with subsequent maintenance burning occurring every five to ten years.

Timber harvest activities consist of regeneration harvest (approximately 1,510 acres including openings greater than 40 acres), site preparation (1,510 acres), reforestation and animal damage control (approximately 1,510 acres), intermediate harvest (approximately 180 acres), and prescribed burning (approximately 570 acres).

Road activities consist of road reconditioning (approximately 20 miles), road reconstruction (approximately 19 miles), and temporary road construction (approximately 2.3 miles).

III. Mitigation Measures

APPLIES TO PROJECT	SOIL RESOURCES		HOW IMPLEMENTED & EFFECTIVENESS
<input checked="" type="checkbox"/>	SR-1	In all timber harvest units, locate and design skid trails, landings and yarding corridors prior to activities to minimize the area of detrimental soil effects. Space tractor skid trails no less than 80 feet apart (edge to edge), except where converging on landings. <i>*This does not preclude the use of feller bunchers.</i>	Implemented through Mandatory Contract Provisions Effectiveness: High, based on experience
<input checked="" type="checkbox"/>	SR-2	In ground-based harvest units <u>where piling occurs, only</u> pile areas of high slash accumulation (exceeding 1 foot in depth) throughout the harvest unit.	Implemented through Mandatory Contract Provisions Effectiveness: Moderate, based on experience

☒	SR-5	Keep piles less than 10 feet in height in units where piling occurs.	Implemented through Mandatory Contract Provisions Effectiveness: High, based on experience
☒	SR-7	In unit 17, coarse woody debris (greater than 3 inches in diameter) will be retained at an average of 7-15 tons per acre following completion of activities. In unit 23, coarse woody debris (greater than 3 inches in diameter) will be retained at an average of 9-18 tons per acre following completion of activities. In all other units, coarse woody debris (greater than 3 inches in diameter) will be retained at an average of 17-33 tons per acre following completion of activities.	Implemented through Contract Provisions Effectiveness: Graham et al. 1994 – High, based on experience
☒	SR-8	In all units, ground-based equipment will only operate on slopes less than 45% and tractor skidding will only occur on slopes less than 35%. Exceptions can be authorized where mitigation measures are applied and soil, slope and equipment are determined appropriate to maintain soil function.	Implemented through Contract Provisions Effectiveness: Unknown
FISHERIES			
☒	FF-2	Avoid direct ignition of fuels within RHCAs	Implemented through Forest Service action Effectiveness: High, based on experience and local monitoring.
☒	FF-3	All reconstructed and temporary constructed road segments within RHCAs would be graveled 100ft. on either side of the crossing upon completion of reconstruction/construction	Implemented through Mandatory and other Contract Provisions Effectiveness: High, based on experience and scientific monitoring.

IV. EXISTING STREAM CONDITIONS

Because RHCAs have and will continue to be retained on streams, a detailed discussion of habitat indicators such as large wood, pools and riparian shade are not discussed. No activities other than the existence or decommissioning of roads have occurred in the RHCAs since 1995, therefore no changes to wood, pools, or shade have occurred as a result of management activities. This analysis focuses only on sediment and how it relates to Forest Plan fish/water quality objectives.

Streams and Fish Species

There are 150 miles of streams within the Green Horse project area. Most are perennial, moderate to high gradient (5 to >12%) and fishless. There are about 5.3, 0.7, 0.9, 0.9, and 4.2 miles of fish bearing stream in O'Hara, Stillman, Island, Falls, and Upper Main Horse Creeks, respectively (Figure 1). Very low densities of steelhead and westslope cutthroat trout were found within project area streams. O'Hara Creek provides designated critical habitat for ESA listed steelhead trout, feeding, migration and overwintering (FMO) habitat for listed bull trout and EFH (essential fish habitat) for spring Chinook/coho salmon (Figure 1). None of the other tributaries contain critical habitat for listed fish species.

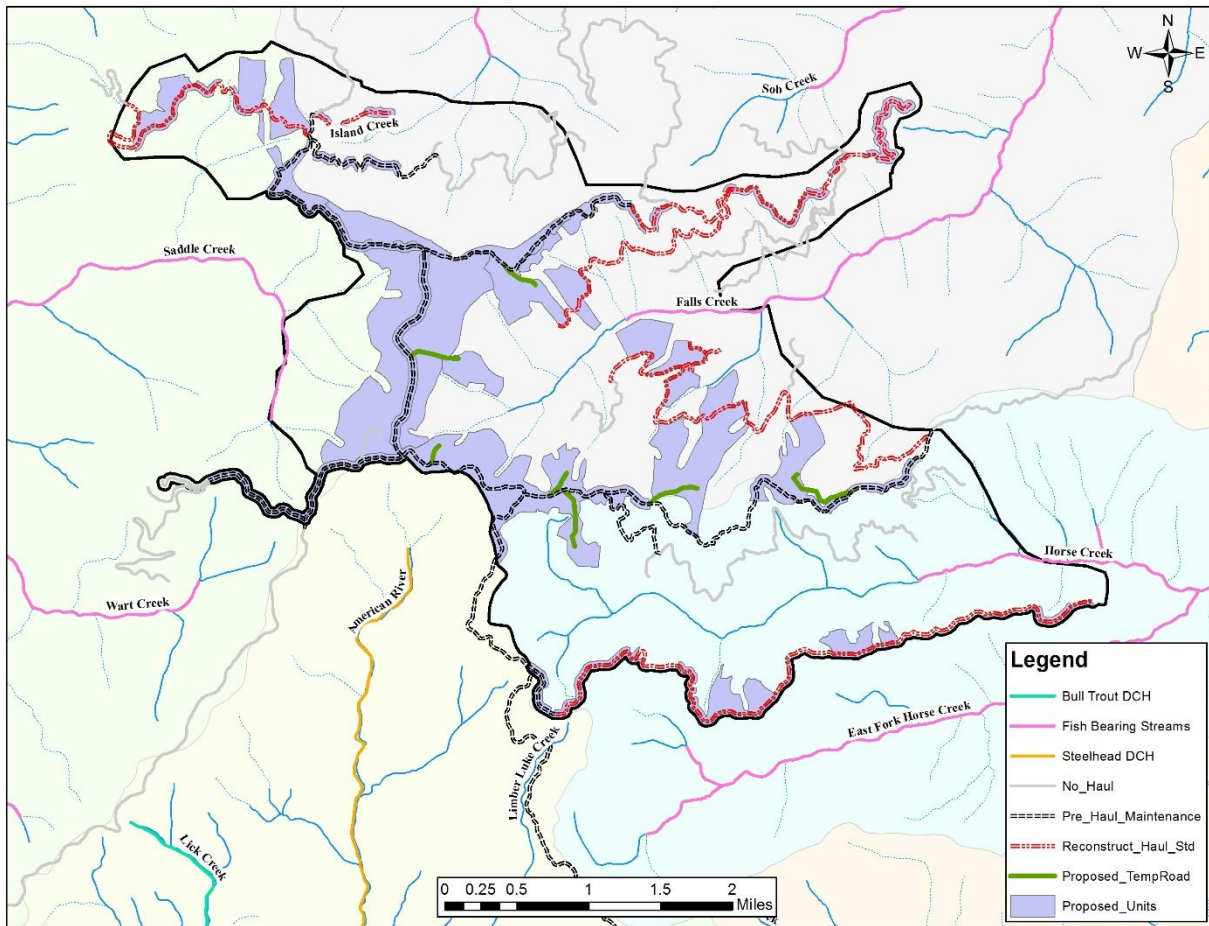


Figure 1: Map of fish bearing streams, ESA designated critical habitat, proposed units, and proposed roads (haul and temporary).

Riparian Condition

Riparian areas mostly well vegetated and dominated by mixed conifer species as a result of fires that occurred in 1889 and the early 1900s. Stream temperatures and streambank stability are likely within natural conditions in these areas due to the thick vegetative cover along most of their length. The lower two-thirds of Island, and lower half of the Falls Creek watersheds burned in the Wash Fire of 2015. Aerial photos of Island Creek show mostly dead trees in riparian areas due to post-fire insect-related mortality. Results are likely similar in Falls Creek. Large wood levels are expected to be high in the future as these trees fall. Riparian areas in the upper third of both watersheds remain dominated by larger green trees.

Past Harvest and Recent Fire- Roughly 3,100 acres of project area watersheds were harvested between 1975 and 1994. Salvage harvest was conducted on about 500 of the acres and clearcuts conducted on the remainder. Under 200 acres have been harvested since 2003. The 2015 Wash Fire burned about 7,900 acres in the Island, Upper Main Horse, and Falls Creek watersheds.

Roads

There are 59 miles of road in the project area of which 43 miles are graveled and the remainder have a native (dirt) surface. The majority occur in the headwaters of the drainages where slopes are gentle and the risk of stream crossing failures is very low (Figure 1). The end result are low RHCA road densities which range between 0.1 and 0.7 mi/mi² for all four Forest Plan prescription watersheds. Densities are within the desired range of less than 1 mi/mi². Road decommissioning has occurred in the project area. A total of 2.2, 0.3, 3.5, 1.1, and 0.3 miles of road have been decommissioned in Island, Falls, Upper Main Horse, Wart and Saddle Creeks, respectively.

V. ASSESSMENT

There are no ESA listed species or designated critical habitat in the project area or directly downstream of the project area. There are ESA species and designated critical habitat near sections of the haul route. Only the affects from the haul route will be discussed below due to the absence of ESA species in the project area. Please see the fisheries section of the EA for detailed discussion of impacts to R1 sensitive fish species and fish habitat from project activities within the project area.

PACFISH RMOs- No treatment or temporary road construction would occur within RHCAs. The project would be consistent with PACFISH as no effects to the RMOs would occur.

Haul Route: The primary haul route for the Green Horse project will be the FS 443. The 443 road is a well maintained and heavily used road within the Red River District. The road is near American River (Bull trout and Steelhead trout DCH) for approximately 2.5 miles. The road is not a native surface road and all major stream crossings are bridges. All haul routes will receive some level of reconditioning or reconstruction prior to hauling activities. Activities may include, but are not limited to, the addition of cross drains near stream crossings, application of surface aggregate, installation of drainage dips, and road blading. Work completed on haul routes will improve road drainage and decrease sediment input to streams. There would not be a measurable change in fish habitat from sediment input caused by timber haul primarily due to BMPs, design features and mitigation measures.

There would be no impacts to ESA species, designated critical habitat or essential fish habitat for Chinook salmon from project activities. This is due to RHCA retention, design features, BMPs, mitigation measures and the distance from the project area to ESA species and their designated critical habitat.

Biological Evaluation for ESA and Regional Forester Sensitive Fish Species

Species	Determination	Rationale
<i>ESA Listed Species`</i>		
Bull Trout	No Effect	There is no ESA listed designated critical habitat or occurrence of bull trout in the project area. The project area is more than 2.5 miles upstream of Bull Trout designated critical habitat in O'hara creek. There will be no downstream effects as a result of PACFISH RHCA retention, design criteria, mitigation measures and BMPs.
Steelhead Trout	No Effect	There is no ESA listed designated critical habitat for steelhead trout in the project area. Low densities of steelhead trout have been documented in the lower reaches of project area streams. The project

Species	Determination	Rationale
		area is more than 2.5 miles upstream of steelhead trout designated critical habitat in O'hara creek. There will be no downstream effects as a result of PACFISH RHCA retention, design criteria, mitigation measures and BMPs.
<i>Region 1 Sensitive Species</i>		
Westslope Cutthroat Trout	No Impact	Westslope cutthroat trout occur in Saddle Creek, Falls, and Horse Creek. There will be no impacts to cutthroat trout or their habitat from proposed activities. Riparian and stream conditions will remain unchanged due to RHCA retainment, project design criteria, mitigation measures and BMPs.
Spring Chinook Salmon	No Impact	Chinook salmon do not occur in the project area streams. There will be no downstream impact to chinook salmon habitat. There will be no change in essential fish habitat (EFH) from the proposed action because riparian and stream conditions will remain unchanged due to RHCA retainment, project design criteria, mitigation measures and BMPs.
Pacific Lamprey	No Impact	Pacific Lamprey are have not been documented in project area streams. No downstream impacts to pacific lamprey or their habitat will occur because riparian and stream conditions will remain unchanged. Primarily due to RHCA retainment, project design criteria, mitigation measures and BMPs.
Inland Redband Trout	No Impact	There are no inland redband trout within the project area streams. This species generally occurs above natural barriers and are segregated from steelhead trout.
Western Pearlshell Mussel	No Impact	No known populations of this mussel occur in the project area. The proposed action will not change the existing condition of the streams in the project area and therefor will have no impact on aquatic species.

/s/ Gage H. McKeag, 06/16/2020
Central Zone Fisheries Biologist
Nez Perce-Clearwater National Forest